



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

Sent To: Greg Denton
TDEC-WPC
6th Floor, L & C Tower Annex
401 Church Street
Nashville, TN 37243-1534


Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00002955
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using
good laboratory practices and in accordance with federal or state
approved methodologies.


Analytical Supervisor

Lab-Sample Number: K00002955001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 10/06/2009 12:20
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.80 pH Units
Chlorine, residual:
Conductivity: 43 uMHO
Temperature: 17.38
Dissolved Oxygen: 9.72 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	200	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	56	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	0.42J	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	25	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.25J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	U	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	0.12J	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	110	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	0.88J	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	0.074J	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	0.10J	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number: K00002955001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 10/06/2009 12:20
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.80 pH Units
Chlorine, residual:
Conductivity: 43 uMHO
Temperature: 17.38
Dissolved Oxygen: 9.72 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	U	µg/L	0.029	0.2	A Bass	10/13/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002955002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 10/06/2009 10:10
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.96 pH Units
Chlorine, residual:
Conductivity: 62 uMHO
Temperature: 18.42
Dissolved Oxygen: 9.13 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	310	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	370	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	2.8J	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	34	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.34J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	1.6	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	0.57J	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	49	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	0.084J	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	2.0J	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number: K00002955002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 10/06/2009 10:10
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations

pH: 7.96 pH Units
Chlorine, residual:
Conductivity: 62 uMHO
Temperature: 18.42
Dissolved Oxygen: 9.13 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/13/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002955003
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 10/06/2009 10:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.62 pH Units
Chlorine, residual:
Conductivity: 65 uMHO
Temperature: 18.29
Dissolved Oxygen: 9.13 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	400	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	420	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	5.5	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	42	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	0.12J	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.50J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	3.3	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	0.92J	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	51	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	0.10J	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	4.4J	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	3.8J	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number: K00002955003
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 10/06/2009 10:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.62 pH Units
Chlorine, residual:
Conductivity: 65 uMHO
Temperature: 18.29
Dissolved Oxygen: 9.13 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/13/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002955004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FD
Station No.: EMORY001.9RO
Date/Time Collected: 10/06/2009 10:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.62 pH Units
Chlorine, residual:
Conductivity: 65 uMHO
Temperature: 18.29
Dissolved Oxygen: 9.13 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	330	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	320	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	5.1	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	40	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.42J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	3.1	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	0.74J	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	53	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	0.088J	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	3.7J	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	3.3J	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number: K00002955004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FD
Station No.: EMORY001.9RO
Date/Time Collected: 10/06/2009 10:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.62 pH Units
Chlorine, residual:
Conductivity: 65 uMHO
Temperature: 18.29
Dissolved Oxygen: 9.13 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/13/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002955005
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FB
Station No.: EMORY001.9RO
Date/Time Collected: 10/06/2009 10:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	U	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	12	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	U	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.10J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	U	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	U	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	U	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	U	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number: K00002955005
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FB
Station No.: EMORY001.9RO
Date/Time Collected: 10/06/2009 10:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations

pH:

Chlorine, residual:

Conductivity:

Temperature:

Dissolved Oxygen:

Other:

Flow:

CFS

TEST: Mercury		METHOD: EPA 245.1						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE		
Mercury	U	µg/L	0.029	0.2	A Bass	10/13/2009		

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002955006
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 10/06/2009 10:45
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.42 pH Units
Chlorine, residual:
Conductivity: 87 uMHO
Temperature: 18.44
Dissolved Oxygen: 9.07 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	290	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	230	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	3.4J	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	35	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.32J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	1.6	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	0.51J	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	56	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	1.1	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	0.060J	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	2.2J	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number: K00002955006
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 10/06/2009 10:45
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.42 pH Units
Chlorine, residual:
Conductivity: 87 uMHO
Temperature: 18.44
Dissolved Oxygen: 9.07 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/13/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002955007
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 10/06/2009 10:58
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.42 pH Units
Chlorine, residual:
Conductivity: 109 uMHO
Temperature: 18.66
Dissolved Oxygen: 8.14 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	130	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	120	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	1.9J	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	35	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.20J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	1.5	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	0.25J	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	41	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	0.95J	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	2.3J	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number: K00002955007
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 10/06/2009 10:58
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.42 pH Units
Chlorine, residual:
Conductivity: 109 uMHO
Temperature: 18.66
Dissolved Oxygen: 8.14 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/13/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002955008
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 10/06/2009 11:15
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.62 pH Units
Chlorine, residual:
Conductivity: 213 uMHO
Temperature: 18.76
Dissolved Oxygen: 7.95 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	160	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	130	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	1.4J	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	34	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.20J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	2.0	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	0.31J	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	35	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	0.96J	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	0.31J	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	2.6J	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number: K00002955008
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 10/06/2009 11:15
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations

pH: 7.62 pH Units
Chlorine, residual:
Conductivity: 213 uMHO
Temperature: 18.76
Dissolved Oxygen: 7.95 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/13/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002955009
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA discharge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 10/06/2009 11:24
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.57 pH Units
Chlorine, residual:
Conductivity: 84 uMHO
Temperature: 21.40
Dissolved Oxygen: 9.23 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	330	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	320	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	0.52J	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	5.8	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	43	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.39J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	5.2	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	0.70J	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	62	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	0.11J	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	4.0J	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	4.3J	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number: K00002955009
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA discharge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 10/06/2009 11:24
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.57 pH Units
Chlorine, residual:
Conductivity: 84 uMHO
Temperature: 21.40
Dissolved Oxygen: 9.23 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/13/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number:	K00002955010	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.47 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	253 uMHO
Project Site No.:	6	Temperature:	18.11
Station No.:	CLINC004.5RO	Dissolved Oxygen:	763 mg/L
Date/Time Collected:	10/06/2009 11:40	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:	10/16/2009		
Date/Time Received:	10/06/2009 14:00		
Received By:	E McCrary		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/07/2009				M Pattanayek	10/7/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	110	µg/L	2.9	10	A Wilson	10/8/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	77	µg/L	6.4	10	M Pattanayek	10/8/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/8/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/8/2009
Barium	31	µg/L	2.5	5	M Pattanayek	10/8/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/8/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/8/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/8/2009
Cobalt	0.18J	µg/L	0.04	1	M Pattanayek	10/8/2009
Copper	1.8	µg/L	0.38	1	M Pattanayek	10/8/2009
Lead	0.27J	µg/L	0.10	1	M Pattanayek	10/8/2009
Manganese	37	µg/L	0.42	1	M Pattanayek	10/8/2009
Nickel	0.90J	µg/L	0.25	1	M Pattanayek	10/8/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/8/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/8/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/8/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/8/2009
Zinc	3.1J	µg/L	1.9	5	M Pattanayek	10/8/2009

Lab-Sample Number:	K00002955010	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.47 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	253 uMHO
Project Site No.:	6	Temperature:	18.11
Station No.:	CLINC004.5RO	Dissolved Oxygen:	763 mg/L
Date/Time Collected:	10/06/2009 11:40	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:	10/16/2009		
Date/Time Received:	10/06/2009 14:00		
Received By:	E McCrary		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.04J	µg/L	0.029	0.2	A Bass	10/13/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

Sent To: Greg Denton
TDEC-WPC
6th Floor, L & C Tower Annex
401 Church Street
Nashville, TN 37243-1534

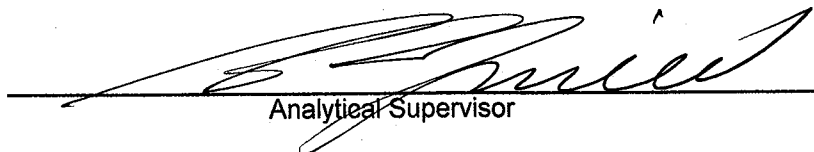
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00002955
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using
good laboratory practices and in accordance with federal or state
approved methodologies.


Analytical Supervisor

Lab-Sample Number: K00002955001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 10/06/2009 12:20
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.80 pH Units
Chlorine, residual:
Conductivity: 43 uMHO
Temperature: 17.38
Dissolved Oxygen: 9.72 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	20	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	21	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	10/7/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/9/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002955002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 10/06/2009 10:10
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.96 pH Units
Chlorine, residual:
Conductivity: 62 uMHO
Temperature: 18.42
Dissolved Oxygen: 9.13 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	19	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	20	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	10/7/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	18	mg/L	10	10	A Peebles	10/9/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002955003
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 10/06/2009 10:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations

pH: 7.62 pH Units
Chlorine, residual:
Conductivity: 65 uMHO
Temperature: 18.29
Dissolved Oxygen: 9.13 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	13	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	20	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	S Burchfield	10/7/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	23	mg/L	10	10	A Peebles	10/9/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002955004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FD
Station No.: EMORY001.9RO
Date/Time Collected: 10/06/2009 10:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.62 pH Units
Chlorine, residual:
Conductivity: 65 uMHO
Temperature: 18.29
Dissolved Oxygen: 9.13 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	21	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	21	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	S Burchfield	10/7/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	25	mg/L	10	10	A Peoples	10/9/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002955005
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FB
Station No.: EMORY001.9RO
Date/Time Collected: 10/06/2009 10:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	U	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	U	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/9/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002955006
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 10/06/2009 10:45
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.42 pH Units
Chlorine, residual:
Conductivity: 87 uMHO
Temperature: 18.44
Dissolved Oxygen: 9.07 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	28	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	25	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	10/7/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peebles	10/9/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002955007
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 10/06/2009 10:58
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.42 pH Units
Chlorine, residual:
Conductivity: 109 uMHO
Temperature: 18.66
Dissolved Oxygen: 8.14 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	86	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	71	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	10/7/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/9/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002955008
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 10/06/2009 11:15
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.62 pH Units
Chlorine, residual:
Conductivity: 213 uMHO
Temperature: 18.76
Dissolved Oxygen: 7.95 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	93	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	84	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	10/7/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/9/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002955009
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA discharge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 10/06/2009 11:24
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 10/16/2009
Date/Time Received: 10/06/2009 14:00
Received By: E McCrary

Field Determinations
pH: 7.57 pH Units
Chlorine, residual:
Conductivity: 84 uMHO
Temperature: 21.40
Dissolved Oxygen: 9.23 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	24	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	29	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	S Burchfield	10/7/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	20	mg/L	10	10	A Peebles	10/9/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number:	K00002955010	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.47 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley F	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	253 uMHO
Project Site No.:	6	Temperature:	18.11
Station No.:	CLINC004.5RO	Dissolved Oxygen:	763 mg/L
Date/Time Collected:	10/06/2009 11:40	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:	10/16/2009		
Date/Time Received:	10/06/2009 14:00		
Received By:	E McCrary		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	S Burchfield	10/9/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	91	mg/L	0.7	1	P Leathers	10/12/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	10/7/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/9/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected